



Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

A most interesting fact is that the nestlings just hatched out of their shells, have perfectly formed spoon bills as seen in plate II. This must indicate that this species is a very old one.

The two plates are from drawings by Mr. E. N. Fischer. The figures are all natural size.

NEST LIFE OF THE SCREECH OWL.¹

BY ALTHEA R. SHERMAN.

IN LARGE boxes put up for the accommodation of Woodpeckers lived the Screech Owls from whose nest lives these studies were made. It was in one of these soap-boxes, nailed against the trunk of a willow tree that the first of these Owls was seen on March 24, 1909; evidently it had been there in January of that year, as the feathers of a luckless Bohemian Waxwing remained to prove. A Screech Owl was seen to spend the day there again on March 30 and on April 2 and 18. On the morning of April 5 a rufous feather fluttering from the entrance hole of the west flicker-box in the barn betrayed the nesting place. The bottom of the box was covered with excelsior in which the female had scratched a hollow in the corner farthest from the entrance, where she was sitting on four fresh eggs. For six days the nest was closely watched and the following facts were ascertained. The meat-offerings brought by her mate and dropped through the hole for his divinity within consisted of a white-footed mouse on two of the mornings, and a Junco on two of them, while on the remaining two mornings nothing was there. On two evenings the female went out early before the nest watch began; on other two she went out after dark alone, and on two evenings her mate came after dark to the hole and called her with a very low cry, which once was answered by a low sharp note from the female, who on both even-

¹ Copyrighted, 1911, by Althea R. Sherman.

ings, almost immediately went out to join him in the search for refreshments. This little incident may be of interest to two classes of people, the sentimentalist and the evolutionist, who may be seeking the missing link between the Screech Owl and the young man who calls to take his lady-love out for ice-cream.

The evening of April 10 was one of those upon which the female had gone out early before the nest was visited. A watch of more than two hours was maintained in order to learn the length of her absence from her eggs. In the meantime a violent wind storm sprung up, that continued all night and the following day, wrecking wind-mills and some buildings. Once the scratching of the bird's claws against the barn was heard, but she failed to come in, probably the fury of the storm prevented her making the home port; however it may have been, she did not return to her eggs, and the history of this nest was closed.

In the following June a nest-box was built into one corner of my blind in the hopes that it might serve an anxious pair of Flickers that were house-hunting. At the same time the future needs of the Screech Owls were kept in mind, as this new nest is just eighty-five feet from the box on the willow in which the male Owl had his head-quarters. The nest in the blind has a depth of twenty inches and a bottom area of eight by twelve inches. The bottom was covered with a thick layer of sawdust over which was spread a deep bed of excelsior. Very unfortunately for the most satisfactory sort of observations the top of the nest comes to the roof of the blind so that the two peep-holes from necessity were made in the sides. There is a hand-hole also, which is covered by a door.

In 1910 the Owls were not seen until the sixteenth day of March, when the male sat in his box on the willow, and the female with a mouse beside her in the nest in the blind, where the first egg was laid on March 27. Until that time came these birds were seen in their respective boxes on but four days. Meanwhile the box in the blind and the nest box in the barn showed signs of nocturnal visits by the scratched up condition of the excelsior in them.

The first egg was found in the nest on the morning of March 27, and was still alone on the evening of the 29th. The following day the nest was not visited, the only day in two months and a half, when visits were omitted. No doubt the second egg was laid

some time on the 30th of March; the third one was deposited on April 1, but two days intervening between the laying of the second and third eggs, while three or more days were the period between the other layings. The fourth egg was in the nest at half past four o'clock in the afternoon of April 4, but was not there at eight o'clock on the previous evening. This shows that it took from eight to nine days to complete the clutch of four eggs. Whether the Owl laid in the night, or in the morning as other birds do, was not ascertained.

The blind, intended as a shelter while watching migrating birds, was built upon posts on a tiny plot of nearly solid earth in a small quagmire. In an air line it stands three hundred feet from the house, and nearly that distance back from the street. When the young Owls were almost ready to leave the nest they were freely exhibited to the neighbors, but previous to that time the existence of the nest was revealed to only a half dozen friends, who proved that six women could keep a secret. In its outside dimensions the blind is but forty-five inches square, hence when four of us entered it, the audience in the ceremony of viewing the Owls, like that of the Greek Orthodox Church, remained standing.

Such were the quarters and surroundings in which the study of the nest was conducted. It was generally visited several times during the day and at least once every evening; the time for the evening visits was usually an hour or two after dusk. Besides them there were two night watches that extended through the greater part of the night, one to half past two, and the other to three o'clock in the morning; and still another, begun after midnight, lasted over an hour. Once a lamp was burned for a few hours, during the rest of the long watches the time was spent in darkness. When an examination of the nest was desired it was illumined by a flash-light lantern. All pictures of these night watches must from necessity be silhouettes, easily drawn by the imagination of anyone. The only really exciting time was the evening of April 5, when a thunderstorm was raging; the rain beat hard upon the roof and sides of the blind, and the wind blew great gusts, which momentarily seemed to threaten the overthrow of my frail shelter. If there should be a fifth egg it was imperative that the fourth one should be marked that night, so for more than an hour the going out of the female was tremulously awaited.

The Owl of 1909 went out every evening and such procedure was expected of this one without fulfillment. Constant incubation appears to have begun on the first day of April after which she was frightened out on two evenings, one of them being the stormy night just mentioned. In order to count the eggs she was pried up with a stick thrust through a peep-hole. Out she would not go although her exit was anxiously awaited night after night until the thirteenth of the month, when once more she was frightened out in order that the eggs might be weighed. Then 248 grains was the weight of egg No. 1: 250 grains that of No. 2; 236 grains of No. 3, and 219 grains of No. 4. When fresh probably they weighed about the same as the eggs of the previous year, viz.: 252, 253, 255 and 261 grains, these figures being arranged in the order of their sizes. Just before it hatched egg No. 3 weighed 199 grains and No. 4 weighed 193 grains. The owlet from the last egg tipped the scales at 153 grains as it came from the shell. Eggs No. 1 and No. 2 were found to have hatched on April 27; No. 3 hatched the following night, and No. 4 about five o'clock in the afternoon of April 29, showing that the period of their incubation was about twenty-six days.

Unlike many other young birds newly hatched Screech Owls are in one of their most attractive guises. Covered to the tips of their toes with a thick white down, they appealed strongly to the hearts of the human mothers who saw them, and as one of them remarked the little owls "looked as if they had white socks on." As they tumbled about in their nest they very forcibly suggested human babies in fleecy white cloaks that are learning to creep. Held in the hand with their beaks downward and out of sight they looked like diminutive blind kittens; perhaps the most noticeable thing about them at that age was their large heads. But this winning aspect of the nestlings was of short duration. In a few days the pin-feathers began to show in the white down which soon turned to a dirty gray color. By the time they were twelve days old they had become most repulsive, exceedingly filthy to handle with an appearance that was decidedly repellant. Perfect miniatures were they of a doddering, half-witted old man: the blue beak was prominent and suggested a large hooked nose, while the down below it took the shape of a full gray beard, and that on

the top of the head looked like the gray hair that covers a low, imbecile forehead: the eyes not fully open were bluish in color, and had a bleared and half-blind appearance. This loathsome semblance lasted no longer than ten days by which time the eyes were full and bright and yellow, the bird was covered with a thick gray down, and looked as if a fac-simile of it could very easily be made from a bunch of gray wool devoid of any anatomy. After this its aspect steadily improved as its feathery covering developed. All the young were of the red phase, as were both of the parents, the male being a deeper rufous.

A friend, a Southern lady, well known because of her writings on negro folk-lore, has written me that the negroes call this species of owl the Shivering Owl. Some ornithologists have suggested that this common name may have reference to the shivering quality of the bird's call-notes. It seems possible that ornithologists may have overlooked a characteristic of this species apparently familiar to many a pickaninny as well as to some bird-nesting boys of a lighter color, and that this owl may have been called the Shivering Owl, because it shivers. It certainly shivers, that it screeches may be a question for dispute. This peculiarity is one of the early things to be observed in the life of these nestlings; but the shivering does not become very pronounced until the bird is two days old, and continues until it is about two weeks old, at which time the young owl is well covered with thick down: therefore it seems quite possible that it shivers because it is cold. To this argument two facts lend weight, one is that the trembling diminishes gradually as the down grows thicker, and the other that the quivering bird sitting on the palm of one hand becomes quiet when well covered by the other hand.

The power of locomotion seems to be very good in young owlets; when one was but a day old it was placed on the floor of the blind where it moved the distance of a foot or more in a very few minutes. As soon as their eyes were fairly open they moved about freely in the nest. On May 3 the oldest owlets kept their eyes open a narrow crack, their lids were red giving the appearance of sore eyes: five days later they looked around as if "taking notice," this was the day upon which they first showed fear. When about three weeks old their manner of winking became a noticeable feature; catching

a glimpse through the peep-hole of a human eye a youngster would stare as if lost in the deepest study, then close one eye in a deliberate long-drawn wink that was exceedingly droll, or in the same manner it would wink both eyes simultaneously which was not so amusing.

The light in the nest was about as bright as that in an ordinary room, that which entered through the three windows of the blind was greater than usually illumines house rooms. In neither place did the young show signs that the light was too powerful for their eyes. Only when carried into bright sunshine was there a blinking: most human eyes are similarly affected. The male Screech Owl often spent nearly the entire day with his head out of his box, in the full rays of the sun, his actions indicating that he quickly noted any unwonted movements. Unfortunately the hole of the female's box could be seen from exposed positions mainly, and not from the house. Twice only was she seen with her head out of her box, then I was more than a hundred yards away in the back yard of a neighbor, as I advanced toward the street into plainer view. she quickly scuttled out of sight. Several times during the day-time she accidentally was frightened from her nest, the directness with which she flew to a tree, then into the box of her mate showed no indications of poor vision. By day both she and her young were able to discover an observing eye when the peep-hole was closed all but the merest crack. A flash-light lantern was used nightly, its rays entering by one peep-hole while observations were made through the other; sometimes the lantern was introduced through the hand-hole and flashed within an inch or two of the mother's face. None of this appeared to excite fear, the light was utterly disregarded, but she at once would commence to sway and to peer at the human eye she detected in the gloom beyond. These things lead me to think that the eyes of this species are similar to those of the cat, capable of seeing well by day, also at night.

Except when disturbed the mother at all times appeared stupid, yet the young were as alert as most nestlings during the day. Until the shivering period was past they sought the warmth found under the mother's wings; after this as one would naturally suspect, they as do other young birds, continued to sleep much, standing in a bunch with their heads pressed together; they preened themselves but not so much as do some nestlings; fre-

quently they yawned, monstrous, big-mouthed yawns. Stretching was the favorite exercise, during it the birds seemed to be made of india-rubber. On May 16 the height to which one stretched itself was seven inches by actual measurement. Sometimes they ate if food was before them, and always they exhibited a wide-awake interest in any eye that they espied looking at them through a peep-hole, even when the mother paid no attention to it. They would stare quietly at it for a time, then stare while their bodies swayed from side to side: this swinging motion would slowly come to an end, the performers would grow drowsy, two pressing against each other would lean their heads together and drop off to sleep. This pose was a favorite one a few years ago among photographers of human subjects. It may be needless to say that, it is much more artistic and charming when assumed by owls.

During their nest life but three varieties of cries were heard from them, the first, beginning as soon as they were out of the shell, had some resemblance to the peep of a chicken, and was uttered by them when out from under the mother's wings, seemingly a cry for shelter and for food: this ceased when they were about three weeks old. At this age a second cry was heard for the first time, which had a decidedly squeaking sound and was made when they were squabbling for the warmest place in the family circle. The remaining cry, a sort of chatter, appeared to be the tone for a dinner discussion, friendly enough in quality, for they were never seen to quarrel at meals. Besides these there was the snapping of the bill which commenced the day they began to show fear, and a hissing sound made when they were frightened.

The owlets were marked with different colored strings, and were weighed every evening about twilight, when an hour or more was spent in the weighing and in observations of them outside the nest. While removing them from the box a struggle generally occurred with signs of fear and the use of claws defensively, but not until three days before they left the nest did one make an offensive clawing attack upon my hand. While out of the nest aside from an occasional snapping of the bill they seldom showed signs of fight or fear, but allowed themselves to be patted and handled freely. Once one of them having exercised until tired turned its head to one side, laid it flat on the palm of my hand and went to

sleep. For inspection they were placed on a stool over whose edges they frequently walked, but often saved themselves from falling by catching hold upon the edge with their hooked bills. Sometimes they arranged themselves along the edge of the stool, looking solemn and wise, then one would begin to sway, the others would join in the exercise, which was continued with the precision of a class in calisthenics. As soon as they could climb by using claws and bill a three-cornered shelf was the favorite perch for one of them, there immovably as a stuffed owl it stood until forcibly displaced.

The female Screech Owl calls to mind the village loafer who in describing his life occupation said that "sometimes he sat and thought, and sometimes he jest sot." In the case of this owl she "jest sot." During one of the long vigils — the one that lasted until half past two in the morning — there was a noise three or four times as of the eggs rattling against each other, and once she snapped her bill. This was all. Verily, a sitting Screech Owl is not a lively companion for the still watches of the night. After incubation began on only four occasions was the nest seen without her, two of these have been mentioned, the evenings on which she was driven out for the purpose of marking and weighing the eggs: on the other two she left voluntarily as the blind door was opened.

Her disposition was unreliable and created much trepidation and uncertainty as to the limit of inspection she would bear. One illustration of this was given on March 28 when she left her nest while her visitors were at the distance of six rods or more from the blind; again on May 1 there was another instance. Up to this time she had suffered the removal of her young from under her both in the daytime and in the evening, then it was the tossing of a common shrew into the nest that scared her out. This was at one o'clock in the afternoon, three hours later her young were stiffening with cold, but warmth furnished by the flame of a lamp and by the sun saved the nestling's lives.

The mother expressed disapproval of the examination of her nest by the snapping of her bill, the laying back of her ear-tufts, and the glare of her eyes, but never did she offer to bite nor to claw the hand. Once her leg, was seized by mistake for a nestling, and she uttered a cry of distress heard at no other time. Quietly

she sat brooding her young for the first ten or twelve days after which the order was reversed and they stood upon her. Day by day she shrunk more and more from view until only an ear-tuft could be seen, then came a day when nothing could be seen of her, but she did not desert the nestlings in the daytime until May 26, three days before they left the nest. Those days she probably spent in the box of her mate where she was seen to take refuge when frightened from her nest.

It was impossible to learn how many of the days the male owl occupied his box, but from the date of the first egg to that upon which the young left the nest, sixty-four days, he was seen there on twenty-seven of them. Sometimes he did not show himself until evening: sometimes an unusual noise about the blind brought him into view. On other days he kept his head out of the hole almost all the time, going to sleep if all were quiet in the blind. When nest duties were not pressing his mate was seen to thrust her head out of her nest, as the holes of the two boxes faced each other many a Romeo and Juliet scene of an owlish character may have been enacted, and winks were exchanged beyond doubt. A few days before they left the nest the owlets began to sit in the hole and there seemed to be little time day or night when the hole was not occupied by one of them.

The male Screech Owl appears to have been the general purveyor for the family. In the first fortnight of incubation there were nine mornings when an excess of food lay beside his mate; of this she rarely ate during the day, but there were times when she did so. On the remaining days of incubation she had food beside her twice, but as soon as the eggs commenced to hatch there was a superabundance provided. An example of this was furnished on April 29 when there lay in store four meadow mice weighing about two-fifths of a pound altogether. This excessive provision lasted only a few days, the supply decreased daily, and none was seen after May 15. Nine o'clock, half past nine, and ten o'clock were hours upon which he was known to have brought food to the nest, eight o'clock in the evening being the earliest time. Twenty minutes before that hour he uttered his first call, after which were two other calls before his claws were heard on the roof overhead followed by continued calling; a sound like the mewing of young kittens was judged to be the answering voice of his mate.

On a few of their earliest days the owlets were weighed in the morning and at night, their increase in weight showing that they were well fed during the day. When the bird from the fourth egg was just hatched, its down being still wet, it was lifted from the nest. It opened its mouth for food and cried; at that time and afterward it was noticed that the young did not open wide their mouths nor throw their heads backward as do the nestlings into whose throats the food is poked, but while begging for food they thrust at the hand with a nuzzling motion very similar to that made by young kittens when searching for dinner. Bits of flesh clipped from meadow mice in store, that were placed in the mouth of a nestling, were swallowed with some difficulty and no apparent relish. Their beaks were stained upon the outside with bloody matter, and as they grew older they would nibble at the mother's bill as if teasing for food. All these things led to a belief that in their earlier days they were fed predigested or partially predigested food, which they pulled from the beak of the mother. After May 10 on only three mornings was any food found in the nest; from that date the mother sat with her bill in one corner of the nest, while the nestlings stood on her back, her wings and her tail. It was surmised that she sought this position to free herself from the teasing of her young. On the tenth an owlet was seen for the first time pulling at food (the body of a frog), as if eating it. The next morning during observations the mother lifted her head from the corner and appeared to eject something from her mouth; at once the owlets scrambled to the spot and seemed to eat for a few minutes. At that time a chance to view the nest from the top would have been most fortunate.

Although Father Owl failed on forty-one out of sixty-four days of nest life to provide a store of food for daytime use it does not follow that the nest was unserved. The food given to the sitting Screech Owl, and later to her young, consisted of moles, house mice, one white-footed mouse, two jumping mice, pocket gophers, ground squirrels, beef both raw and cooked, canned salmon, English Sparrows' eggs and their young, all of which was eaten or at least it disappeared. On May 13 the nestlings were seen eating eggs of the English Sparrow: two days later the oldest owlet was seen to eat portions of a gopher leg; holding the meat with one foot it

tore off and ate a mouthful, then rested four or five minutes before eating again. On May 28 the youngest fledgling was watched while it ate the front leg of a gopher. Twice it tried to swallow the piece and was obliged to disgorge and tear off bits of the flesh, on the third trial the leg disappeared bone and all, the whole performance occupying upwards of twenty minutes. That fore leg had not been weighed, but its mate remained and was found to weigh 203 grains: the weight of the owlet that night was 1904 grains. To use a well worn illustration it was equivalent to a boy weighing ninety-five pounds eating at one meal a ten pound leg of mutton. The young Owls could not be induced to eat when outside of their nest. One evening while in the house they would not touch young English Sparrows offered them, but ate them the moment they were returned to the nest.

Pellets ejected by the young were found for the first time on May 10; it may be well to note that this was the first date upon which they were seen eating the food that lay in the nest. A pellet disgorged on May 27 weighed sixty-two grains, which was one-thirtieth of the weight of the bird that ejected it. No pellets from the mother's throat were found in the nest, yet once she was known to have remained there continuously for twenty-one hours. She seemed to have well defined ideas of house-keeping. Not always did the food dropped into the nest by her mate fall close to the wall beneath the hole, and the contributions to her larder that were pushed in through a peep-hole never fell there, but soon all was piled up in orderly shape against the north wall beneath the entrance hole, which seemed to be the normal arrangement until she was disturbed by the frequent opening of the hand-hole; she then changed her location to the north side of the nest and piled the game on the south side. One day the temperature rose to mid-summer heat, and some of the excessive supply of food became exceedingly gamy and over-ripe. Discontinuance of the nest study was threatened, but in the night there was a clearing out of objectionable matter and such conditions did not recur. Nor did the plumage of the young become soiled. Their natural position in the nest seems to have been a standing one, this taken with the fact that the nest was made above a deep bed of sawdust may account for this cleanliness.

After the very sudden and unexpected going out of the mother bird on the first day of May she was not seen to leave the nest until the seventh evening of the month: from that date onward for a week she sometimes staid in the nest until part of the weighing was done, or if out, she came in and remained with her nestlings. On the 17th of May she did not go out when the owlets were removed from the nest although two of us were in the blind engaged in conversation, but she uttered a mournful, tremulous cry two or three times. After that in the evening she left the nest when the blind was visited. At times one parent would come to the windows, which at night were covered with heavy pasteboard shades, where it would cling calling to the young that were out of their nest. On a few nights a sound was made that resembled the chattering of human teeth. After the 18th of the month the expression of displeasure, displayed by the parents, grew more emphatic evening after evening. At first the demonstrations, made at a distance, were limited to snappings of the bill and a noise resembling the yelp of a dog: gradually feigned attacks on the person of the enemy increased in number and came nearer. The bird from some perch in a tree would describe an elliptical path in the air, coming with savage snappings until overhead and about ten feet up, it would utter one weird *eh-hue* cry before it swung back to its tree. In this long-drawn *eh-hue* note it was not so much what the owl said as the tone of voice in which it was said that engendered *cutis anserina* popularly known as "goose-flesh."

It was a keen disappointment that there were not more opportunities for the study of the food habits of the Screech Owls. In the forty pieces of game found in the nest there were eight birds, three frogs, one common shrew, and twenty-eight mice: the last named were chiefly meadow mice with two or three house mice. Enough of the meadow mice were weighed to ascertain their average weight to be upward of 600 grains. After leaving their nest on May 29, the oldest ones being thirty-two days old, the owlets were caught and kept in captivity several days. Their food was weighed and it was learned that when fed to satiety each one consumed meat equal in weight to one meadow mouse. This estimate may fairly indicate that the forty pieces mentioned were nearly one-eighth of the amount eaten by the entire family during

the next season. On this basis of reckoning sixty-four birds fell victims to these night terrors; as but one of the eight birds seen was an English Sparrow little credit belongs to the owls on that score; four were Song Sparrows and three Juncos. After the Juncos had passed northward there were numerous reddish feathers in the nest indicating that Swamp Sparrows often appeared on the bill of fare.

The very large proportion of Song Sparrows and Juncos slain invites investigation. During some part of the nest period fully thirty species of small birds were present, of which Goldfinches, Vesper, Savannah, White-throated, Tree, Chipping, Field and Swamp Sparrows were as numerous at times as the Song Sparrows, or more plentiful, for in time all Song Sparrows disappeared. In three places on our grounds this species had been accustomed to nest, but as the days went by one voice after another was missed from the bird chorus. The fact that Juncos and Song Sparrows more frequently than their numerous congeners fell victims to these rapacious birds, suggests the thought that probably they flush at night more readily. Usually the head, wings and tail of a bird were torn off before it was dropped into the nest, only once was a whole one brought in. At times the food was marked; from this it was made certain that the body of a Song Sparrow lay untouched for two days, thereby showing that a mouse diet was preferred.

Out of forty pieces of game eight were birds or twenty per cent of the whole. Dr. Fisher's investigation of the food habits of this species shows that of 212 Screech Owls whose stomachs contained food 38 of them had eaten birds or eighteen per cent of the whole. This indicates that our owls were but two per cent worse than the species in general, yet their ravages were so great that it was decided if we desired a little bird paradise where all good birds were welcome through the summer time there Screech Owls could not be encouraged to remain, therefore the captive owlets were sent to a neighboring village, a pair of them to two invalid little boys in a hospital, the others to a friend in the same place. Soon all of them gained their freedom and with it the chance to prey upon all the little birds about them.

Weight of Owls, 1910.

Days in the lives of the Screech Owls.	Egg April 13 Hatching	No. 1 248 grs.	No. 2 250 grs.	No. 3 236 grs. 199 "	No. 3 219 grs. 193 "	Aggregate Weight	Daily Average
1		180	179				
2		221	218	174			
3		281	267	198	156	912	225
4		347	334	244	168	1093	273
5		422	410	296	186	1314	328
6		608	579	418	256	1861	465
7		705	670	552	346	2273	568
8		824	815	646	436	2721	680
9		994	920	820			
10		1006	1031	841	730	3608	902
11		1284	1077	1030	795	4186	1046
12		1184	1121	987	840	4132	1033
13		1421	1405	1190	1131	5147	1286
14		1414	1451	1416	1196	5477	1369
15		1695	1620	1531	1323	6169	1542
16		1573	1521	1445	1300	5839	1459
17		1682	1560	1431	1415	6088	1522
18		1714	1556	1505	1554	6329	1582
19		1917	1742	1721	1695	7075	1768
20		1870	1861	1844	1708	7283	1820
21		1930	1770	1746	1654	7100	1775
22		1954	1756	1740	1731	7181	1795
23		2010	1873	1706	1849	7438	1857
24		2105	1932	1856	1961	7854	1963
25		2301	2179	1980	2088	8548	2137
26		2395	1959	1948	2110	8412	2103
27		2119	1945	1841	2034	7939	1984
28		Not weighed					
29		2295	2040	1950	2180	8465	2116
30		2050	1789	1771	1940	7490	1872
31		2088	1835	1893	1895	7711	1928
32		2128	1970	1872	1904	7874	1968
33		2120	2043	1912	1860	7935	1983
34		2185	2109	1910	1964	8168	2042
35		2360			2145		
36		2645			2225		
37		2455			2250		
		Not weighed for 9 days					
47		2708			2471		